In the claims

1-33. (Cancelled)

34. (original) An apparatus for predicting acute responses to cardiac resynchronization therapy, the apparatus comprising:

(a) an electrocardiography device being configured to measure a first interval during an intrinsic systolic cycle and a second interval during a stimulated systolic cycle; and

(b) a controller configured to compare the percent change in duration between the first interval and the second interval against a pre-determined threshold value.

35. (original) The apparatus according to claim 34, wherein the controller is further configured to classify a response type of at least one selected stimulation site according to the percent change in duration between the first interval and the second interval.

36. (original) The apparatus according to claim 35, wherein:

(a) the at least one selected stimulation site is classified as responding if the percent change in duration between the first interval and the second interval is less than the pre-determined threshold value; and

(b) the at least one selected stimulation site is classified as non-responding if the percent change in duration between the first interval and the second interval is greater than or equal to the pre-determined threshold value.

37. (original) The apparatus according to claim 34, wherein the pre-determined threshold value is between 10 and 25 percent of the change in duration between the first interval and the second interval.

38. (original) The apparatus according to claim 34, wherein the electrocardiography device is a surface electrocardiogram.

39. (original) The apparatus according to claim 34, wherein the electrocardiography device is an intracardiac electrocardiogram.

40. (original) The apparatus according to claim 34, wherein:

(a) the first interval is an intrinsic QRS complex (W_B) measured during a non-stimulated systolic cycle; and

(b) the second interval is a stimulated QRS complex (W_S) measured during a stimulated systolic cycle.

41. (original) The apparatus according to claim 40, wherein the intrinsic QRS complex (W_B) is evaluated as a function of more than one intrinsic systolic cycles.

42. (original) The apparatus according to claim 41, wherein the intrinsic QRS complex (W_B) is evaluated as the average of the more than one intrinsic systolic cycles.

43. (original) The apparatus according to claim 41, wherein the more than one intrinsic systolic cycles are non-consecutive.

44. (original) The apparatus according to claim 40, wherein the stimulated QRS complex (W_S) is evaluated as a function of more than one stimulated systolic cycles.

45. (original) The apparatus according to claim 44, wherein the stimulated QRS complex (W_S) is evaluated as the average of the more than one stimulated systolic cycles.

46. (original) The apparatus according to claim 44, wherein the more than one stimulated systolic cycles are non-consecutive.

47. (original) The apparatus according to claim 40, wherein the stimulated QRS complex is measured during ventricular stimulation at a short atrioventricular delay (AVD).

48. (original) The apparatus according to claim 47, wherein the short atrioventricular delay (AVD) is less than about one-half of an intrinsic atrioventricular interval (AV interval).

49. (original) The apparatus according to claim 48, wherein the short atrioventricular delay (AVD) is between the initiation of the AV interval (AV interval) to about one-fourth of the AV interval.

50. (original) The apparatus according to claim 40, wherein the pre-determined threshold value is between 10 and 25 percent of the change in duration between the intrinsic QRS complex (W_B) measured during a non-stimulated systolic cycle and the stimulated QRS complex (W_S) measured during a stimulated systolic cycle.

51. (original) The apparatus according to claim 50, wherein the pre-determined threshold value is between 15 and 20 percent of the change in duration between the intrinsic QRS complex (W_B) measured during a non-stimulated systolic cycle and the stimulated QRS complex (W_S) measured during a stimulated systolic cycle.

52. (original) The apparatus according to claim 50, wherein the pre-determined threshold value is about 18 percent of the change in duration between the intrinsic QRS complex (W_B) measured during a non-stimulated systolic cycle and the stimulated QRS complex (W_S) measured during a stimulated systolic cycle.

53. (original) An apparatus for predicting acute responses to cardiac resynchronization therapy, the apparatus comprising:

(a) an electrocardiography means being configured to measure a first interval during an intrinsic systolic cycle and a second interval during a stimulated systolic cycle; and

(b) a controlling means configured to compare the percent change in duration between the first interval and the second interval against a pre-determined threshold value.

54. (original) The apparatus according to claim 53, wherein the controlling means is further configured to classify a response type of at least one selected stimulation site according to the percent change in duration between the first interval and the second interval.

55. (original) The apparatus according to claim 54, wherein:

(a) the at least one selected stimulation site is classified as responding if the percent change in duration between the first interval and the second interval is less than the pre-determined threshold value; and

(b) the at least one selected stimulation site is classified as non-responding if the percent change in duration between the first interval and the second interval is greater than or equal to the pre-determined threshold value.

56. (original) The apparatus according to claim 53, wherein the pre-determined threshold value is between 10 and 25 percent of the change in duration between the first interval and the second interval.

57. (original) The apparatus according to claim 53, wherein the electrocardiography device is a surface electrocardiogram.

58. (original) The apparatus according to claim 53, wherein the electrocardiography device is an intracardiac electrocardiogram.

59. (original) The apparatus according to claim 53, wherein:

(a) the first interval is an intrinsic QRS complex (W_B) measured during a non-stimulated systolic cycle; and

(b) the second interval is a stimulated QRS complex (W_S) measured during a stimulated systolic cycle.

60. (original) The apparatus according to claim 59, wherein the intrinsic QRS complex (W_B) is evaluated as a function of more than one intrinsic systolic cycles.

61. (original) The apparatus according to claim 60, wherein the intrinsic QRS complex (W_B) is evaluated as the average of the more than one intrinsic systolic cycles.

62. (original) The apparatus according to claim 60, wherein the more than one intrinsic systolic cycles are non-consecutive.

63. (original) The apparatus according to claim 59, wherein the stimulated QRS complex (W_S) is evaluated as a function of more than one stimulated systolic cycles.

64. (original) The apparatus according to claim 63, wherein the stimulated QRS complex (W_S) is evaluated as the average of the more than one stimulated systolic cycles.

65. (original) The apparatus according to claim 63, wherein the more than one stimulated systolic cycles are non-consecutive.

66. (original) The apparatus according to claim 59, wherein the stimulated QRS complex is measured during ventricular stimulation at a short atrioventricular delay (AVD).

67. (original) The apparatus according to claim 66, wherein the short atrioventricular delay (AVD) is less than about one-half of an intrinsic atrioventricular interval (AV interval).

68. (original) The apparatus according to claim 67, wherein the short atrioventricular delay (AVD) is between the initiation of the AV interval (AV interval) to about one-fourth of the AV interval.

69. (original) The apparatus according to claim 59, wherein the pre-determined threshold value is between 10 and 25 percent of the change in duration between the intrinsic QRS complex (W_B) measured during a non-stimulated systolic cycle and the stimulated QRS complex (W_S) measured during a stimulated systolic cycle.

70. (original) The apparatus according to claim 69, wherein the pre-determined threshold value is between 15 and 20 percent of the change in duration between the intrinsic QRS complex (W_B) measured during a non-stimulated systolic cycle and the stimulated QRS complex (W_S) measured during a stimulated systolic cycle.

71. (original) The apparatus according to claim 69, wherein the pre-determined threshold value is about 18 percent of the change in duration between the intrinsic QRS complex (W_B) measured during a non-stimulated systolic cycle and the stimulated QRS complex (W_S) measured during a stimulated systolic cycle.

72-77. (Cancelled)

78. (original) An apparatus for predicting acute responses to cardiac resynchronization therapy, the apparatus comprising:

(a) an electrocardiographic device being configured to measure a first interval during an intrinsic systolic cycle and a second interval during a stimulated systolic cycle over more than one atrioventricular delay; and

(b) a controller being configured to determine the percent change in duration between the first interval and the second interval for each of the atrioventricular delays; the controller further being configured to classify an acute response type of at least one selected stimulation site according to variations in the percent change in duration between the first interval and the second interval across each of the atrioventricular delays.

79. (original) The apparatus according to claim 78, wherein:

(a) the acute response type of the at least one selected stimulation site is classified as responding if the percent change in duration between the first interval and the second interval is non-varying across each of the atrioventricular delays; and

(b) the acute response type of the at least one selected stimulation site is classified as non-responding if the percent change in duration between the first interval and the second interval is varying across each of the atrioventricular delays.

80. (original) The apparatus according to claim 78, wherein the electrocardiographic device comprises a surface electrocardiogram.

81. (original) The apparatus according to claim 78, wherein the electrocardiographic device comprises an intracardiac electrocardiogram.

82. (original) The method according to claim 78, wherein:

(a) the first interval is an intrinsic QRS complex (W_B) measured during a non-stimulated systolic cycle; and

(b) the second interval is a stimulated QRS complex (W_S) measured during a stimulated systolic cycle.

83. (original) The method according to claim 82, wherein:

(a) the acute response type of the at least one selected stimulation site is classified as responding if the percent change in duration between the intrinsic QRS complex (W_B) and the stimulated QRS complex (W_S) is non-varying across each of the atrioventricular delays; and

(b) the acute response type of the at least one selected stimulation site is classified as non-responding if the percent change in duration between the intrinsic QRS complex (W_B) and the stimulated QRS complex (W_S) is varying across each of the atrioventricular delays.

84. (original) An apparatus for predicting acute responses to cardiac resynchronization therapy, the apparatus comprising:

(a) an electrocardiography means being configured to measure a first interval during an intrinsic systolic cycle and a second interval during a stimulated systolic cycle over more than one atrioventricular delay; and

(b) a controlling means being configured to determine the percent change in duration between the first interval and the second interval for each of the atrioventricular delays; the controlling means further being configured to classify an acute response type of at least one selected stimulation site according to variations in the percent change in duration between the first interval and the second interval across each of the atrioventricular delays.

85. (original) The apparatus according to claim 84, wherein:

(a) the acute response type of the at least one selected stimulation site is classified as responding if the percent change in duration between the first interval and the second interval is non-varying across each of the atrioventricular delays; and

(b) the acute response type of the at least one selected stimulation site is classified as non-responding if the percent change in duration between the first interval and the second interval is varying across each of the atrioventricular delays.

86. (original) The apparatus according to claim 84, wherein the electrocardiography means comprises a surface electrocardiogram.

87. (original) The apparatus according to claim 84, wherein the electrocardiography means comprises an intracardiac electrocardiogram.

88. (original) The method according to claim 84, wherein:

(a) the first interval is an intrinsic QRS complex (W_B) measured during a non-stimulated systolic cycle; and

(b) the second interval is a stimulated QRS complex (W_S) measured during a stimulated systolic cycle.

89. (original) The method according to claim 88, wherein:

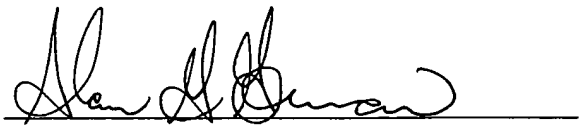
(a) the acute response type of the at least one selected stimulation site is classified as responding if the percent change in duration between the intrinsic QRS complex (W_B) and the stimulated QRS complex (W_S) is non-varying across each of the atrioventricular delays; and

(b) the acute response type of the at least one selected stimulation site is classified as non-responding if the percent change in duration between the intrinsic QRS complex (W_B) and the stimulated QRS complex (W_S) is varying across each of the atrioventricular delays.

Please charge any additional fees or credit any overpayment to Deposit Account No. 13-2725.

Respectfully submitted,

MERCHANT & GOULD



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